

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Stefan Disch et al.

Application No.: 10/069,087

Confirmation No.: 9098

Filed: May 29, 2002

Art Unit: 1711

For: LOW-EMISSION COLORED
POLYOXYMETHYLENE MOLDING
COMPOSITION

Examiner: N. M. Nutter

APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

As required under § 41.37(a), this brief is filed within two months of the Notice of Appeal filed in this case on December 15, 2006, and is in furtherance of said Notice of Appeal.

The fees required under § 41.20(b)(2) are dealt with in the accompanying
TRANSMITTAL OF APPEAL BRIEF.

1 This brief contains items under the following headings as required by 37 C.F.R. § 41.37
2 and M.P.E.P. § 1206:

- 3 I. Real Party In Interest
- 4 II. Related Appeals and Interferences
- 5 III. Status of Claims
- 6 IV. Status of Amendments
- 7 V. Summary of Claimed Subject Matter
- 8 VI. Grounds of Rejection to be Reviewed on Appeal
- 9 VII. Argument
- 10 VIII. Claims
- 11 Appendix A Claims
- 12 Appendix B Evidence
- 13 Appendix C Related Proceedings

14 I. **REAL PARTY IN INTEREST**

15 The real party in interest for this appeal is:

16 TICONA GmbH. See reel # 013607 and frame # 0038.

17 II. **RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS**

18 There are no other appeals, interferences, or judicial proceedings which will directly
19 affect or be directly affected by or have a bearing on the Board's decision in this appeal.

20 III. **STATUS OF CLAIMS**

21 A. Total Number of Claims in Application

22 There are 17 claims pending in application.

1 B. Current Status of Claims

2 1. Claims canceled: 4-10, 13, and 20

3 2. Claims withdrawn from consideration but not canceled: none

4 3. Claims pending: 1-3, 11, 12, 14-19, and 21-26

5 4. Claims allowed: none

6 5. Claims rejected: 1-3, 11, 12, 14-19, and 21-26

7 C. Claims On Appeal

8 The claims on appeal are claims 1-3, 11, 12, 14-19, and 21-26

9 **IV. STATUS OF AMENDMENTS**

10 Applicant filed A Request for Reconsideration and a terminal disclaimer on
11 November 7, 2006.¹ The Examiner responded to the Request for Reconsideration in an Advisory
12 Action mailed November 21, 2006. None of the claims were amended after final, accordingly,
13 the claims enclosed herein as Appendix A are the claims filed prior to the final office action
14 being issued. However, the claims in Appendix A do incorporate the amendments indicated in
15 the paper filed by Applicant on May 30, 2006.

16 **V. SUMMARY OF CLAIMED SUBJECT MATTER**

17 The application has three independent claims 1, 15 and 25. The applicant is also arguing
18 separate patentability for dependent claims 3, 16-19, 21-24 and 26. Claims 1, 3, 15-19 and 21-26
19 along with the support are as follows:

¹ It is noted that the applicant entitled the Request for Reconsideration as an Amendment After Final Rejection but there were no amendments submitted with the response.

- 1 1. A colored molding composition made from polyacetal copolymer, wherein the polyacetal
2 copolymer consisting essentially of oxymethylene units and oxyethylene units, and strong
3 protonic acid and/or a derivative of a strong protonic acid was used as initiator during
4 preparation of the polyacetal copolymer, and a colorant, and the emission of
5 formaldehyde from the colored molding composition is lower than from a molding
6 composition for which the polyacetal copolymer was prepared using a Lewis acid as
7 initiator [see the specification at page 3, lines 31-37]; and wherein the formaldehyde
8 emission, determined on test specimens in accordance with the German Automotive
9 Industry Recommendation No. 275 (VDA 275), is not more than 20 mg/kg. [see the
10 specification at page 4, lines 8 and 9 and page 5, lines 35-37]
- 11 3. The molding composition as claimed in claim 2, wherein the colorants carry a coating of
12 an alkali metal salt of a fatty acid having at least 12 carbon atoms. [see the specification
13 at page 6, lines 10-13]
- 14 15. A process to prepare a molding composition which comprises preparing a polyacetal
15 copolymer which consisting essentially of oxymethylene units and oxyethylene units,
16 using trifluoromethanesulfonic acid and/or a derivative of trifluoromethanesulfonic acid
17 as an initiator [see the example on page 7], mixing the polyacetal copolymer with at
18 least one colorant selected from the group consisting of white pigments, black pigments
19 and color pigments, [see the specification at page 4, lines 3 and 4] and obtaining a
20 colored polyacetal molding composition whose emission of formaldehyde is lower than
21 from a molding composition for which the polyacetal copolymer was prepared using a
22 Lewis acid as an initiator [see the specification at page 4, lines 11-15] and wherein the

1 formaldehyde emission, determined on test specimens in accordance with the German
2 Automotive Industry Recommendation No. 275 (VDA 275), is not more than 20 mg/kg.
3 [see the specification at page 4, lines 8 and 9 and page 5, lines 35-37].

4 16. The process as claimed in claim 15, wherein said colorant is in an amount from 0.1 to
5 3.0% by weight. [see the specification at page 4, lines 3 and 4 and page 5, lines 13-16]

6 17. The process as claimed in claim 16, wherein the colorant carries a coating of an alkali
7 metal salt of a fatty acid having at least 12 carbon atoms. [see the specification at page
8 6, lines 10-13]

9 18. The process as claimed in claim 15, wherein the polyacetal copolymer comprises from
10 0.1 to 10 mol% of oxyethylene units. [see the specification at page 4, lines 19-21]

11 19. The process as claimed in claim 15, wherein the formaldehyde emission, determined on
12 test specimens in accordance with the German Automotive Industry Recommendation
13 No. 275 (VDA 275), is not more than 60% of the formaldehyde emission of a colored
14 molding composition for which the polyacetal copolymer was prepared using BF₃ as
15 initiator. [see the original claim 5]

16 21. The process as claimed in claim 15, which further comprises from 0.1 to 10% by weight
17 of stabilizers and auxiliaries. [see the specification at page 5, lines 13-18]

18 22. The process as claimed in claim 16, wherein the polyacetal copolymer comprises from
19 1.0 to 2.5 mol% of oxyethylene units. [see the specification at page 4, lines 16-21]

- 1 23. The process as claimed in claim 15, wherein the formaldehyde emission, determined on
2 test specimens in accordance with the German Automotive Industry Recommendation
3 No. 275 (VDA 275), is not more than 50% of the formaldehyde emission of a colored
4 molding composition for which the polyacetal copolymer was prepared using BF₃ as the
5 initiator. [see the original claim 5]
- 6 24. The process as claimed in claim 16, wherein the formaldehyde emission, determined on
7 test specimens in accordance with the German Automotive Industry Recommendation
8 No. 275 (VDA 275), is less than 10 mg/kg. [see the specification at page 4, lines 1-9
9 and in particular line 9]
- 10 25. A process for reducing the formaldehyde emission of colored molding compositions
11 made from polyacetal copolymer, which comprises preparing a polyacetal copolymer
12 consisting essentially of oxymethylene units and oxyethylene units, [see the
13 specification at page 4, lines 1-9 and original claim 8] using trifluoromethanesulfonic
14 acid and/or a derivative of trifluoromethanesulfonic acid as an initiator, [see the example
15 on page 7] mixing the polyacetal copolymer with at least one colorant selected from the
16 group consisting of white pigments, black pigments and color pigments, [see the
17 specification at page 4, lines 3 and 4] and obtaining a colored polyacetal molding
18 composition whose emission of formaldehyde is lower than from a molding composition
19 for which the polyacetal copolymer was prepared using a Lewis acid as initiator. [see the
20 specification at page 4, lines 11-15]
- 21 26. The process as claimed in claim 25, wherein when the initiator is added in a solvent. [see
22 the original claim 9]

1 **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

2 The only outstanding rejection remaining in the application is the following:

3 Claims 1-3, 11, 12, 14-19 and 21-26 are rejected under 35 U.S.C. 103(a) as being
4 unpatentable over Auerbach, U.S. Patent No. 4,666,995 ("Auerbach") taken with Paul, U.S.
5 Patent No. 4,727106 ("Paul") in view of Chapman, U.S. Patent No. 3,656,982 ("Chapman") all
6 in view of Mück U.S. Patent No. 5,994,455 ("Mück").

7 **VII. ARGUMENT**

8 Claims 1-3, 11, 12, 14-19 and 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable
9 over Auerbach taken with Paul in view of Chapman, all in view of Mück.

10 A. **Claims 1, 2, 11, 12 and 14**

11

12 Although, the use of POM as a carrier material for pigments is known, the existing
13 shortcoming of chemical instability and subsequent formaldehyde evolution during processing
14 and from molding has not been satisfactorily eliminated while at the same time retaining the
15 required property profile.

16 The object of the applicant's claimed invention was to develop colored POM molding
17 compositions which contain a colorant and in which the formaldehyde emission observed
18 hitherto has been substantially reduced, in fact, the formaldehyde emission, determined on
19 test specimens in accordance with the German Automotive Industry Recommendation No. 275
20 (VDA 275), is not more than 20 mg/kg, without impairing the known advantageous properties
21 of POM. (see the specification at page 3, lines 22-25). The prior art references the Examiner has
22 applied against the claimed invention did not recognize nor solve this problem.

1 The Examiner has stated that Auerbach teaches the use of a colorant. As the Examiner
2 correctly cited Auerbach at the paragraph bridging col. 8 and 9 which states,

3 It is within the ambit of the present invention that the oxymethylene
4 polymer molding composition also include, if desired,
5 1) plasticizers,
6 2) other formaldehyde scavengers,
7 3) mold lubricants,
8 4) antioxidants,
9 5) fillers,
10 6) colorants,
11 7) reinforcing agents,
12 8) light stabilizers,
13 9) pigments,
14 10) other stabilizers,
15 11) and the like, so long as such additives do not materially affect the
16 desired properties of the resulting molding composition and the
17 articles molded therefrom. The additional additives can be admixed at
18 any convenient stage in the molding composition preparation, but
19 usually are added when the oxymethylene polymer is being blended or
20 admixed with the polyamide-carrier resin dispersion.²
21

22 It is noted that there are 11 optional ingredients cited by Auerbach. Auerbach gives no
23 motivation to particularly select any of the optional ingredients (colorant).

24 As the Examiner pointed out, Paul discloses at col. 11, lines 3-21,

25 The stabilized oxymethylene polymer compositions also include if
26 desired,
27 1) plasticizers,
28 2) pigments,
29 3) lubricants and
30 4) other stabilizers, e.g.,
31 5) stabilizers against degradation by ultraviolet light,
32 6) e.g., 2,2'-dihydroxy-4,4'-dimethoxy -benzophenone;
33 7) 2-hydroxy-4-methoxy-benzophenone;
34 8) 2-hydroxy-4-methoxyl-chlorobenzophenone,
35 9) nucleants,
36 10) UV screens and
37 11) absorbers,
38 12) metal soaps,

² The numbers have been inserted by the applicant.

1 13) reinforcers and
2 14) filler such as
3 15) glass,
4 16) talc,
5 17) white mica and
6 18) gold mica,
7 19) polymeric substances such as
8 20) ethylene vinyl acetate,
9 21) polyurethanes,
10 22) impact modifiers, and
11 23) color pigments which are compatible with oxymethylene polymers,
12 e.g.,
13 24) red pigments such as
14 25) azo dye and
15 26) cadmium sulfide-cadmium selenide reds and
16 27) "Mercadium" reds,
17 28) blue pigments such as
18 29) phthalocyanine blues,
19 30) green pigments such as
20 31) chromium oxide greens,
21 32) white pigments such as
22 33) titanium dioxide whites, and
23 34) black pigments such as
24 35) carbon blacks which can be incorporated in amounts of up to about
25 5% by weight, based upon the total weight of the composition.³

26
27
28 It is noted that there are 35 optional ingredients cited by Paul. Paul gives no motivation to
29 particularly select any of the optional ingredients.

30
31 Paul further discloses at col. 3, lines 28-36,

32
33 The term oxymethylene polymer as used herein is intended to include any
34 oxymethylene polymer having --CH₂ O-- groups comprising **at least about 50**
35 **percent of the recurring units**, for example, homopolymer, copolymers,
36 terpolymers and the like.

37
38 Chapman describes only some pearlescent pigments for **cosmetically usage** (e.g.
39 abstract). Under the heading of Description Of the Preferred Embodiments, Chapman states:

³ The numbers have been inserted by the applicant.

1 "The present invention is particularly useful and beneficial in conjunction with
2 pearlescent pigments which are to be incorporated in compressed cosmetic
3 powders." (emphasis added)

4 There are no compositions described in Chapman which encompasses
5 oxymethylene/oxyethylene copolymers. In addition, there is no indication given which kind of
6 oxymethylene/oxyethylene copolymers has to be used for the reduction of the formaldehyde
7 emission raised through the mixture of said copolymer with a colorant (pigment). The applicant
8 does not believe that Chapman is related to the applicant's claimed invention or for that matter is
9 combinable with the other references applied against the claims. Chapman is in a non-analogous
10 art (cosmetic powders).

11 The Examiner states at the second full paragraph of page 6 of the Office Action that he
12 relies upon Mück solely to show the trifluoromethanesulfonic acid initiator.

13 However, none of the applied references disclose that the formaldehyde emission,
14 determined on test specimens in accordance with the German Automotive Industry
15 Recommendation No. 275 (VDA 275), is not more than 20 mg/kg (see independent claim 1).

16 The Examiner argues at the bottom of page 6 of the Final Office Action mailed July 17,
17 2006, that the low level of formaldehyde emission is inherent. However, the applicant
18 respectfully disagrees. In a second step, a colorant is added to these polyoxymethylenes to form
19 a colored composition with a low formaldehyde emission level. However, it is important to
20 understand that the addition of a colorant usually leads to an increased destruction of the
21 polyoxymethylene and following to an increased emission of formaldehyde. In the state of the art,
22 the increased formaldehyde emission is reduced by addition of N-containing compounds. In view
23 of the present invention it was unexpectedly found that such an increase of emitted formaldehyde

1 occurred by adding a colorant can be avoided respectively reduced if the specific prepared
2 polyoxymethylenes are used. So the argument of the Examiner is to simply state that only a
3 polyoxymethylene with a low emission level of formaldehyde is used to prepare a colored
4 polyoxymethylene composition which shows also a low formaldehyde emission. In contrast
5 thereto it was not obvious that the colored, specific prepared polyoxymethylenes shows a
6 reasonable lower increase of formaldehyde emission compared with other polyoxymethylenes
7 prepared with other methods after coloration.

8 The oxymethylene/oxyethylene copolymers can be prepared with several alternative
9 initiators (e.g. with Lewis acids, see Mück column 1, lines 35-39). There is no evidence in Mück
10 that copolymers containing oxymethylene and oxyethylene units and a colorant (pigment) leads
11 to an increased formaldehyde emission and that this emission can be reduced by mixing specific
12 prepared copolymers (with a strong protonic acid) with the colorant (pigment). For example, the
13 preparation of the copolymers with Lewis acids (described in Mück) leads to a higher
14 formaldehyde emission (see e.g., the present application, in particular the comparative examples,
15 wherein the copolymer is prepared with BF_3 (page 8 line 1, results page 10 table 1)).

16 In the state of the art the use of N-containing stabilizers are known to increase e.g. light
17 or melt stability (e.g. EP 448037, Kosinski (previously applied by the Examiner against the
18 claims), see page 6, lines 4-19 of Kosinski). Surprisingly, oxymethylene-oxyethylene
19 copolymers prepared with a specific method (with strong protonic acids as initiator) leads to a
20 low formaldehyde emission level if a colorant is added. There is **NO** indication in Auerbach,
21 Paul, Mück, nor Chapman that this specific combination (oxymethylene-oxyethylene copolymers
22 in accordance with claim 1 and a colorant) to get colored copolymers results in a low emission
23 level of formaldehyde, in particular, formaldehyde emission, determined on test specimens in

1 accordance with the German Automotive Industry Recommendation No. 275 (VDA 275), is not
2 more than 20 mg/kg.

3 Further a person of ordinary skill in the art couldn't find any evidence in to prepare
4 copolymers containing oxymethylene and oxyethylene units mixed with a colorant (pigment),
5 wherein the copolymer is prepared with a strong protonic acid to reduce the formaldehyde
6 emission of the resulting colored copolymer compound.

7 In summary, there are 11 optional ingredients cited by Auerbach. Auerbach gives no
8 motivation to particularly select the colorant amongst the optional ingredients. There are 35
9 optional ingredients cited by Paul. Paul gives no motivation to particularly select any of the
10 optional ingredients. Chapman is related to a totally different field of invention that the applicant
11 does not believe one of ordinary skill in the POM art would even look at Chapman. Again,
12 Chapman describes only some pearlescent pigments for cosmetically usage. Mück does not
13 disclose that the formaldehyde emission, determined on test specimens in accordance with the
14 German Automotive Industry Recommendation No. 275 (VDA 275), is not more than 20 mg/kg.

15 The Examiner must consider the references as a whole, In re Yates, 211 USPQ 1149
16 (CCPA 1981). The Examiner cannot selectively pick and choose from the disclosed multitude of
17 parameters without any direction as to the particular one selection of the reference without
18 proper motivation. The mere fact that the prior art may be modified to reflect features of the
19 claimed invention does not make modification, and hence claimed invention, obvious unless the
20 prior art suggested the desirability of such modification (In re Gordon, 733 F.2d 900, 902,
21 221 USPQ 1125, 1127 (Fed. Cir. 1984); In re Baird, 29 USPQ 2d 1550 (CAFC 1994) and In re
22 Fritch, 23 USPQ 2nd. 1780 (Fed. Cir. 1992)). In re Gorman, 933 F.2d 982, 987, 18 USPQ2d
23 1885, 1888 (Fed. Cir. 1991) (in a determination under 35 U.S.C. § 103 it is impermissible to

1 simply engage in a hindsight reconstruction of the claimed invention; the references themselves
2 must provide some teaching whereby the applicant's combination would have been obvious); In
3 re Dow Chemical Co., 837 F.2d 469,473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988) (under 35
4 U.S.C. § 103, both the suggestion and the expectation of success must be founded in the prior art,
5 not in the applicant's disclosure). The applicants disagree with the Examiner why one skilled in
6 the art with the knowledge of the references would selectively modify the references in order to
7 arrive at the applicants' claimed invention. The Examiner's argument is clearly based on
8 hindsight reconstruction.

9 Obviousness cannot be established by combining the teachings of the prior art to produce
10 the claimed invention absent some teaching, suggestion, or incentive supporting this
11 combination, although it may have been obvious to try various combinations of teachings of the
12 prior art references to achieve the applicant's claimed invention, such evidence does not establish
13 prima facie case of obviousness (In re Geiger, 2 USPQ 2d. 1276 (Fed. Cir. 1987)). There would
14 be no reason for one skilled in the art to Auerbach taken with Paul in view of Chapman and
15 Mück. For the above reasons, this rejection should be withdrawn.

16 B. Claim 3

17 Claim 3 further limits claim 2 and further requires that the colorants carry a coating of an
18 alkali metal salt of a fatty acid having at least 12 carbon atoms. The Examiner is correct that
19 Chapman shows this feature, but as stated above, the applicant does not believe that one of
20 ordinary skill in the colored molding composition made from polyacetal copolymer art would
21 rely upon Chapman as an applicable reference. Again, Chapman is related to a totally different
22 field of invention (cosmetic). The applicant does not believe one of ordinary skill in the POM art

1 would even look at Chapman. Chapman describes only some pearlescent pigments for cosmetic
2 usage. The other references the Examiner relies upon do not show this claimed feature.

3

4 **C. Claims 15, 16, 18, 19 and 21- 23**

5 In addition to the arguments presented for claim 1 above, Claim 15 is narrower than
6 claim 1, with respect to the following features:

7 (1) the initiator is very specific, trifluoromethanesulfonic acid and/or a derivative of
8 trifluoromethanesulfonic acid,

9 (2) the colorant is specific and is selected from the group consisting of white
10 pigments, black pigments and color pigments.

11 Again, as stated above, Mück does mention colorants. The Examiner states at the second
12 full paragraph of page 6 of the Final Office Action that he relies upon Mück soley to show the
13 trifluoromethanesulfonic acid initiator. The Examiner has relied upon Paul for the disclosure of
14 the specific colorants which are selected from the group consisting of white pigments, black
15 pigments and color pigments.

16 Again, the Examiner must consider the references as a whole, In re Yates, supra. The
17 Examiner cannot selectively pick and choose from the disclosed multitude of parameters without
18 any direction as to the particular one selection of the reference without proper motivation.
19 The mere fact that the prior art may be modified to reflect features of the claimed invention does
20 not make modification, and hence claimed invention, obvious unless the prior art suggested
21 the desirability of such modification (In re Gordon, supra); In re Baird, supra and In re Fritch,
22 supra). In re Gorman, supra) (in a determination under 35 U.S.C. § 103 it is impermissible to
23 simply engage in a hindsight reconstruction of the claimed invention; the references themselves

1 must provide some teaching whereby the applicant's combination would have been obvious); In
2 re Dow Chemical Co., supra) (under 35 U.S.C. § 103, both the suggestion and the expectation of
3 success must be founded in the prior art, not in the applicant's disclosure). The applicants
4 disagree with the Examiner why one skilled in the art with the knowledge of the references
5 would selectively modify the references in order to arrive at the applicants' claimed invention.
6 The Examiner's argument is clearly based on hindsight reconstruction.

7 Obviousness cannot be established by combining the teachings of the prior art to produce
8 the claimed invention absent some teaching, suggestion, or incentive supporting this
9 combination, although it may have been obvious to try various combinations of teachings of the
10 prior art references to achieve the applicant's claimed invention, such evidence does not establish
11 prima facie case of obviousness (In re Geiger, supra). There would be no reason for one skilled
12 in the art to Auerbach taken with Paul in view of Chapman and Mück.

13 Claims 16, 18, 19 and 21- 24 ultimately depend upon claim 15 and would be patentable
14 for at least the same reasons claim 15 is patentable.

15

16 D. **Claim 17**

17 Claim 17 further limits claim 16 and further requires that the colorants carry a coating of
18 an alkali metal salt of a fatty acid having at least 12 carbon atoms. The Examiner is correct that
19 Chapman shows this feature, but as stated above, the applicant does not believe that one of
20 ordinary skill in the colored molding composition made from polyacetal copolymer art would not
21 rely upon Chapman as an applicable reference. As stated above, Chapman is related to a
22 different art (cosmetic usage) and is not combinable with the other references. The other
23 references the Examiner do not teach this limitation.

1 **E. Claim 24**

2 Claim 24 further limits claim 16, which further limits claim 15 as discussed above. In
3 addition claim 24 further requires the formaldehyde emission, determined on test specimens in
4 accordance with the German Automotive Industry Recommendation No. 275 (VDA 275), is less
5 than 10 mg/kg. As stated above, none of the references teach a formaldehyde emission less than
6 20 mg/kg as is required in claims 1 and 15, let alone a formaldehyde emission less than 10 mg/kg
7 as is required in claim 24. The Examiner has just asserted that this limitation is inherent in the
8 prior art. The applicant respectfully disagrees.

9

10 **F. Claims 25 and 26**

11 Claim 25 is a process claim directed for reducing the formaldehyde emission of colored
12 molding compositions made from polyacetal copolymer. Claim 25 requires a composition
13 whose emission of formaldehyde is lower than from a molding composition for which the
14 polyacetal copolymer was prepared using a Lewis acid as initiator. None of the references teach
15 reducing formaldehyde emissions. The Examiner has asserted that this is inherent and the
16 applicant respectfully disagrees.

17 Claim 25 requires a that the initiator is trifluoromethanesulfonic acid and/or a derivative
18 of trifluoromethanesulfonic acid. The Examiner has relied upon Mück for this feature.

19 In addition, this group of claims requires the specific colorant selected from the group
20 consisting of white pigments, black pigments, and color pigments. As stated above, the
21 Examiner has relied upon Chapman for this teaching but Chapman is not believed to be
22 combinable because it is directed to a non-analogous art.

23 Again, the Examiner must consider the references as a whole, *In re Yates, supra*. The
24 Examiner cannot selectively pick and choose from the disclosed multitude of parameters without

1 any direction as to the particular one selection of the reference without proper motivation.
2 The mere fact that the prior art may be modified to reflect features of the claimed invention does
3 not make modification, and hence claimed invention, obvious **unless the prior art suggested**
4 **the desirability of such modification** (*In re Gordon, supra*); *In re Baird, supra* and *In re Fritch,*
5 *supra*). *In re Gorman, supra*) (in a determination under 35 U.S.C. § 103 it is impermissible to
6 simply engage in a hindsight reconstruction of the claimed invention; the references themselves
7 must provide some teaching whereby the applicant's combination would have been obvious); *In*
8 *re Dow Chemical Co., supra*) (under 35 U.S.C. § 103, both the suggestion and the expectation of
9 success must be founded in the prior art, not in the applicant's disclosure). The applicants
10 disagree with the Examiner why one skilled in the art with the knowledge of the references
11 would selectively modify the references in order to arrive at the applicants' claimed invention.

12 The Examiner's argument is clearly based on hindsight reconstruction.

13 Obviousness cannot be established by combining the teachings of the prior art to produce
14 the claimed invention absent some teaching, suggestion, or incentive supporting this
15 combination, although it may have been obvious to try various combinations of teachings of the
16 prior art references to achieve the applicant's claimed invention, such evidence does not establish
17 *prima facie* case of obviousness (*In re Geiger, supra*). There would be no reason for one skilled
18 in the art to Auerbach taken with Paul in view of Chapman and Mück.

19 Claim 26 is dependent upon claim 25 and would be patentable for at least the
20 same reasons claim 25 is patentable.

21

22

1 **VIII. CLAIMS**

2 A copy of the claims involved in the present appeal is attached hereto as Appendix A. As
3 indicated above, the claims in Appendix A do include the amendments filed by Applicant on
4 May 30, 2006, and do not include the amendment(s) filed on November 7, 2006.

Respectfully submitted,

By _____
Ashley I. Pezzner

Registration No.: 35,646
CONNOLLY BOVE LODGE & HUTZ LLP
1007 North Orange Street
P.O. Box 2207
Wilmington, Delaware 19899
(302) 658-9141
(302) 658-5614 (Fax)
Attorney for Applicant

APPENDIX A**Claims Involved in the Appeal of Application Serial No. 10/069,087**

1. A colored molding composition which comprises a polyacetal copolymer, wherein the polyacetal copolymer consisting essentially of oxymethylene units and oxyethylene units, and strong protonic acid and/or a derivative of a strong protonic acid was used as initiator during preparation of the polyacetal copolymer, and a colorant, and the emission of formaldehyde from the colored molding composition is lower than from a molding composition for which the polyacetal copolymer was prepared using a Lewis acid as initiator and wherein the formaldehyde emission, determined on test specimens in accordance with the German Automotive Industry Recommendation No. 275 (VDA 275), is not more than 20 mg/kg.
2. The molding composition as claimed in claim 1, which comprises from 0.1 to 3.0% by weight of colorants selected from the group consisting of white pigments, black pigments, and color pigments.
3. The molding composition as claimed in claim 2, wherein the colorants carry a coating of an alkali metal salt of a fatty acid having at least 12 carbon atoms.
11. The molding composition as claimed in claim 1, wherein the polyacetal copolymer comprises from 0.1 to 10 mol% of oxyethylene units.
12. The molding composition as claimed in claim 1, wherein the formaldehyde emission, determined on test specimens in accordance with the German Automotive Industry Recommendation No. 275 (VDA 275), is not more than 60% of the formaldehyde emission of a colored molding composition for which the polyacetal copolymer was prepared using BF_3 as the initiator.
14. The molding composition as claimed in claim 1, which further comprises from 0.1 to 10% by weight of stabilizers and auxiliaries.

- 1 15. A process to prepare a molding composition which comprises preparing a polyacetal
2 copolymer which consisting essentially of oxymethylene units and oxyethylene units,
3 using trifluoromethanesulfonic acid and/or a derivative of trifluoromethanesulfonic acid
4 as an initiator, mixing the polyacetal copolymer with at least one colorant selected from
5 the group consisting of white pigments, black pigments and color pigments, and
6 obtaining a colored polyacetal molding composition whose emission of formaldehyde is
7 lower than from a molding composition for which the polyacetal copolymer was prepared
8 using a Lewis acid as an initiator and wherein the formaldehyde emission, determined on
9 test specimens in accordance with the German Automotive Industry Recommendation
10 No. 275 (VDA 275), is not more than 20 mg/kg.
- 11 16. The process as claimed in claim 15, wherein said colorant is in an amount from 0.1 to
12 3.0% by weight.
- 13 17. The process as claimed in claim 16, wherein the colorant carries a coating of an alkali
14 metal salt of a fatty acid having at least 12 carbon atoms.
- 15 18. The process as claimed in claim 15, wherein the polyacetal copolymer comprises from
16 0.1 to 10 mol% of oxyethylene units.
- 17 19. The process as claimed in claim 15, wherein the formaldehyde emission, determined on
18 test specimens in accordance with the German Automotive Industry Recommendation
19 No. 275 (VDA 275), is not more than 60% of the formaldehyde emission of a colored
20 molding composition for which the polyacetal copolymer was prepared using BF_3 as
21 initiator.
- 22 21. The process as claimed in claim 15, which further comprises from 0.1 to 10% by weight
23 of stabilizers and auxiliaries.
- 24 22. The process as claimed in claim 16, wherein the polyacetal copolymer comprises from
25 1.0 to 2.5 mol% of oxyethylene units.
- 26 23. The process as claimed in claim 15, wherein the formaldehyde emission, determined on
27 test specimens in accordance with the German Automotive Industry Recommendation

- 1 No. 275 (VDA 275), is not more than 50% of the formaldehyde emission of a colored
2 molding composition for which the polyacetal copolymer was prepared using BF₃ as the
3 initiator.
- 4 24. The process as claimed in claim 16, wherein the formaldehyde emission, determined on
5 test specimens in accordance with the German Automotive Industry Recommendation
6 No. 275 (VDA 275), is less than 10 mg/kg.
- 7 25. A process for reducing the formaldehyde emission of colored molding compositions
8 made from polyacetal copolymer, which comprises preparing a polyacetal copolymer
9 consisting essentially of oxymethylene units and oxyethylene units, using
10 trifluoromethanesulfonic acid and/or a derivative of trifluoromethanesulfonic acid as an
11 initiator, mixing the polyacetal copolymer with at least one colorant selected from the
12 group consisting of white pigments, black pigments and color pigments, and obtaining a
13 colored polyacetal molding composition whose emission of formaldehyde is lower than
14 from a molding composition for which the polyacetal copolymer was prepared using a
15 Lewis acid as initiator.
- 16 26. The process as claimed in claim 25, wherein when the initiator is added in a solvent.

1

2

APPENDIX B

3

4 No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the
5 examiner is being submitted.

6

7

1

2

3

4 No related proceedings are referenced in II. above, hence copies of decisions in related
5 proceedings are not provided.

APPENDIX C